Vol. VII, No. 8
25 Cents a Copy

November, 1926

American Cinematographer

Published in
Hollywood, California

By American Society
of Cinematographers

Fire pot Hole, Yellowstone River, Yellowstone National Park. Reproduced from the Location Library of American Society of Cinematographers, Hollywood.

THIS MONTH:

Motion and the Art of Cinematography—By Slavko Vorkapich; Professional Notes for Amateur Cinematographers—By Joseph A. Dubray, A. S. C.; How to Edit the Amateur's Films—By H. Syril Dusenbery.

N exceptionally long line of gradations combined with fine grain, high speed and excellent color separation, makes

DU PONT

Negative the better stock

"Ask the men who use it"

Dupont-Pathe Film Mfg. Corp.

35 West 45th St., New York

Smith and Aller, Inc.

Pacific Coast Distributors

1056 North Cahuenga Ave. GRanite 6669

Hollywood, Calif.

Vol. VII NOVEMBER, 1926 No. 8

American Cinematographer

FOSTER GOSS, *Editor and General Manager*

Contents:

Page

Alvin V. Knechtel Is Elected to A.S.C. 4

The Editor's Lens 5

Projection—*Conducted by Earl J. Denison*
Build Theatres Around Projection—
By Daniel B. Clark, A.S.C. 6

In Camerafornia 7

Amateur Cinematography—
A Professional's Notes for Amateurs—
By Joseph A. Dubray, A.S.C. 8

How to Edit the Amateur's Films—
By H. Syril Dusenbery, A.S.C. 9

Motion and the Art of Cinematography *(In Two Installments)*
By Slavko Vorkapich 10

A Cinematographer's Capital Investment 12

Trueball Tripod Head for Professional Cameras
Invented 26

A. S. C. Roster

An educational and instructive publication, espousing progress and art in motion picture photography.
Subscription: United States, $3.00 a year, Canada, $3.50 a year; foreign, $4.00 a year; single copies 25c.
Published monthly by THE AMERICAN SOCIETY OF CINEMATOGRAPHERS, *Inc*
Advertising rates on application.
1219-20-21-22 Guaranty Building, Hollywood, Calif. Telephone GRanite 4274
(Copyright, 1926, by the American Society of Cinematographers, Inc.)

Alvin V. Knechtel Is Elected *to* A. S. C.

Membership Is Bestowed *on* Distinguished Cinematographer *of* Varied Career

Alvin V. Knechtel, A.S.C., and Knechtel, left, and Gene Tunney, heavyweight champion, reviewing Tunney's "fighting forms." Still was taken while the A.S.C. member was photographing "The Wallop Works" for Pathe.

Alvin V. Knechtel has been elected to membership in the American Society of Cinematographers, the A.S.C. Board of Governors announces.

Knechtel, who joined First National on contract during the past month, has had a long cinematographic career, varied as well as interesting.

He started in the profession in Detroit in 1915 in a small commercial laboratory. He was almost immediately assigned to the camera, and was obliged to develop and print his own work. He continued in this line for four years, during which time he photographed several Detroit-made five-reelers. His regular work in the course of this period, however, consisted chiefly in making commercial and educational pictures, such as "The Manufacture of the Buick Car," in seven reels, and the like.

With Paramount

In 1919, Knechtel received an assignment from Famous Players-Lasky to make a trip to the South Seas by boat from Boston through the Panama Canal, north of Honolulu, and then south to Samoa. On this expedition, he made nine pictures for the "Paramount Magazine." In addition, he filmed "Some More Samoa" and "South Sea Magic," together with numerous short subjects and educationals.

Freelance

On his return to New York, Knechtel worked two years with Baumer Productions, Inc., and then launched into freelance work, producing his own short subjects and selling the negatives outright to the releasing organizations. His chief sales were to Pathe with the result that he eventually joined the staff of that organization. For Pathe, he toured the United States by automobile, assembling material for short subjects, and later made another trip to Honolulu, after which he was

(Continued on Page 24)

The EDITOR'S LENS • • focused by FOSTER GOSS

An Example Close *at* Home

AN INTERESTING booklet, "The Home of Kodak," just received from Rochester, tells one of the most romantic stories of modern industry—that of the Eastman Kodak Company.

¶ The publication recounts the early efforts of George Eastman, how he was dissatisfied with the "wet plate" type of photography in vogue in the late seventies, and how he eventually evolved the "dry plate" method. There came the steady growth of his business until, within a few years, there was laid the foundation of what is now the gigantic institution at Rochester.

¶ Eastman was not slow to realize the potentialities of the motion picture business, and set his organization to work to perfect the raw stock so necessary to the unprecedented new business.

¶ For the film industry, there is a very definite moral in the career of George Eastman and in the history of the firm that bears his name. If Eastman had been content to accept the old "wet plate" type of photography as final and to dabble around in the manufacture thereof, he would have been bound around by the limits of the primitive stages of a new science.

¶ Even though photography in any form still seemed nothing short of a miracle at the time Eastman began his life's work, he was not disposed to regard it as a matter of the ultimate, but, instead, with that daring and imagination which characterizes all great men, insisted on perceiving its weaknesses and then set about to improve them. In this excursion into the realm of the industrial and scientific unknown, he not only profited himself, but he made the world at large profit—by virtue of his activities in motion pictures alone.

¶ The moral is that those within the profession can never allow themselves to look upon their calling as having reached a point of saturation, and thus to permit their imaginations to become satiated. What film workers in all lines need is a highly developed sense of values and proportions—which, is it not, closely akin to a deep-seated sense of humor?

In the Making

NEW camera angles and photographic effects bring new kinds of photoplays. The camera is an instrument to conjure with, and, like the Phoenix, rises, for a new life, out of the ashes of what previously may have been regarded as its own insufficiency. It has come to pass that novel cinematographic treatments invariably are the basis of the plaudits of the critics in heralding the triumphs of those films which are looked to as ushering in a new era in the cinema. But, in the efforts to merit these very plaudits, a strained condition is reached—which makes ridiculous that which was intended to be sublime.

¶ The engulfing wisdom that belongs to some directors and writers might well benefit from consultations with none other than the cinematographer when these new and novel film treatments are desired.

¶ After all, it is the business of the cinematographer to know such things; and, to say that he is able to respond when called on, is merely to make a matter-of-fact statement.

¶ The writer should find in him a close consultant while the script is being written. How much better this would be than arbitrarily to finish a scenario wherein certain inflexible "effects" are tersely specified, with the cinematographer left to work out the results without having the benefit of, or the time in which to gain a thorough understanding of just what the writer is trying to express. The same applies to directors

¶ The most successful of the foreign-made films have recognized the foregoing principles, and, as a result, have enjoyed triumphs which even Americans have tried to emulate.

¶ The basic fact must be recognized that the cinematographer is not solely a medium of expression, but that he likewise is a medium of *creation* in motion pictures.

PROJECTION • *Conducted by* EARL J. DENISON

Build Theatres *Around* Projection

By Daniel B. Clark, A.S.C.

Projection Room Should Be Reserved Best Location *when* Plans Are Drawn

If good projection is to be desired, the time to begin to provide for it is when an architect first begins to draw the plans for a new motion picture theatre—or legitimate house for that matter.

Gone is the era when an orthodox theatre was converted into a cinema palace by tacking up a screen and finding a hole in the wall in which could be thrown the projection "booth." But do our theatre builders give ample consideration to the room that is to house the projectors?

Bad Throw

In last month's issue of the *American Cinematographer,* H. Lyman Broening, A.S.C., called attention to the bad throw in a Los Angeles theatre, to which fell the honor of presenting the important production "Ben Hur," to the film capital. It so happens that this is a comparatively new house, only a couple of years old. While it presumably was primarily designed for a legitimate theatre, it is reasonable to believe that the exhibition of motion pictures in an establishment, located as this is, was well within the thoughts of those responsible for the erection and planning of the house That an imperfect projection arrangement was created is lamentable.

Afterthought?

Yet this condition exists throughout the country today. Projection rooms are put in as more or less an afterthought. They are placed in a part of the house most agreeable to other considerations whether it be the general style of interior architecture which cannot be marred under any conditions or what not.

Come to View Picture

But patrons do not come to a theatre to feast their eyes exclusively on the beauty of a house's interior. They come to see a picture—a good picture. And they cannot see such with imperfect projection. And there cannot be perfect projection, if the projectors must do all but walk around corners to get the images on the screen.

Architect's Duty

Motion picture theatre architects have a duty that is greater than the mere designing of edifices that are pleasing to the eye. Their task is to design a structure in which motion pictures may be seen to the greatest advantage—which means nothing more than that it must be possible to project films at the greatest advantage.

Should Consult

If it is not a part of the equipment of such architects to know where and how to place such projection rooms, then it should behoove them to consult some competent projection engineer who is fortified with the necessary knowledge. In a word, the cinema house should be built around the projection appointments, rather that the latter's being built into the theatre.

All Are Concerned

All of this represents an exceedingly deep-seated matter, of interest to all those identified with a given motion picture—whether it be the projectionist, exhibitor, producer, star, director or cinematographer. We all need the best projection—for by projection we place our wares before the ultimate consumer, the theatre-goer

Those who erect theatres are in the key position. It is they who may insist not only that their houses have the best projection equipment obtainable, but that, in addition, this best equipment be provided that place in the house, most suited to maximum results. Mr. Theatre Builder, tell that to Mr. Architect!

L. Guy Wilky and Frank Cotner, both A.S.C. members, have returned to Hollywood from San Antonio where they spent several weeks photographing for "Wings," a Paramount feature, on which Harry Perry, A.S.C , is chief cinematographer. Among the other A.S.C. members shooting with Perry on this production are Paul Perry and Faxon Dean.

* * * *

William Marshall, A.S.C., who is photographing Paramount's "Stranded in Paris," starring Bebe Daniels, had his staff augmented, for extra set-ups, with the services of Stephen S. Norton and Perry Evans, both A.S.C. members, during the past month. With Marshall, Norton and Evans filmed location scenes.

* * * *

E Burton Steene, A.S.C., did the Akeley work on "Stranded in Paris," most of his filming having been in interiors. This circumstance indicates the revolutionizing of Akeley cinematography, which in the past was confined, in the minds of production officials, to exteriors only. The present practice is to specify Akeley shots for interiors as well as exteriors; in fact, many scripts have been known to have Akeley shots written into them by various scenarists. The widespread use of Akeley scenes is said to be due in no small measure to the professional efforts of Steene, whose concentration on this type of activity has not only set him up as the foremost man in this particular calling but has created a demand for Akeley shots generally.

* * * *

Charles Van Enger, A.S.C., has returned to Hollywood from New York City and is photographing "Easy Pickings," a First National production, starring Anna Q. Nilsson with Kenneth Harlan as the lead. George Archainbaud is directing.

* * * *

Victor Milner, A.S.C., is filming Adolphe Menjou in "Blonde or Brunnette," a Paramount production directed by Richard Rosson.

H Lyman Broening, A.S.C., is filming "Father Said No," an F.B.O. production directed by Sam Wood. The cast includes Danny O'Shea, Kit Guard, Al Cooke and Mary Brian.

* * * *

Reginald Lyons, A.S.C., has finished the filming of "Desert Valley," starring Buck Jones for Fox. The feature carries plenty of thrills. Location scenes were shot by Lyons in Red Rock Canyon, in the Mohave Desert. Reggie has already begun work on "War Horses," Jones' next starring vehicle for Fox.

* * * *

Gilbert Warrenton, A.S.C., is filming Universal's "The Love Thrill." Laura La Plante is starred.

* * * *

Ira Morgan, A.S.C., is photographing "The Taxi Dancer" at the Metro-Goldwyn-Mayer studios.

* * * *

George Schneiderman, A.S.C., is back in Hollywood from New York City where he filmed metropolitan location scenes for Fox's production of "The Auctioneer." Blase New York was so enamoured of George's camera that he was forced to camoflage the instrument behind a canvas tent arrangement as used only by the electric companies. The ruse worked so effectively that one sophisticated New Yorker walked up to George Sidney, who was simulating a peddler among the unsuspecting crowds on the sidewalks, and informed the actor: "You ought to be in the movies" Ask either of the Georges if this isn't true!

* * * *

Bert Glennon, A.S.C., is photographing the Paramount production, "Barbed Wire," starring Pola Negri. Rowland V. Lee is directing.

* * * *

Joseph A. Dubray, A.S.C., has concluded the cinematography in a current Tiffany production, directed by Louis Gasnier. The cast includes Raymond Hitchcock, Theodore von Eltz, Majorie Daw, Vivian Oakland and Buddy Post.

Amateur Cinematography

A Professional's Notes *for* Amateurs

By J. A. Dubray, A.S.C.

First *of* Series *of* Articles Presented *in a* Manner Easy *for* Amateur *to* Comprehend

The study of "optics" in general has been the source of the publication of a great quantity of excellent works dealing with this subject. The different branches of this science, of which photographic optics is one, have been the cause of further augmenting of the number of these publications.

The work of research in the maze of information thus given is so laborious that the beginner is rarely able or willing to put forth the necessary time involved.

It is the aim of the writer of this series of articles, of which this is the first, to give the reader a clear understanding of "How Light Works," eliminating as much as possible the confusion of too many technical expressions as found in the text books.

To the members of the "Junior Cameramen's Club" and to the sincere amateur in photography are these articles cordially and fraternally dedicated.

"Light is God, God is Light!" said the mystic, and that was all.

"Hail Holy Light! Offspring of Heaven's First Born," said the poet, and that was all.

"Light is a Stimulus that Acts on Organisms and Causes a Sensation!" said the philosopher, and that was about all.

"Light is the Agent or Force, by the Action of Which Upon the Organs of Sight Objects from Which it Emanates are Rendered Visible!" said the lexicologist, and that also was all

"Light, is all of that," said the scientist, but for him, that was not all. It was merely the starting point from which to wrestle from it its secrets, the reasons for its behavior, to *understand* it, so that through this understanding he could make use of its properties for the benefit of mankind.

The origin of things is, at times, of secondary importance to the scientist.

"When the thing *exists*, study it!" science says. "Study it; learn to *know* it; and through this knowledge you may approach the *origin*, but even if this origin shall forever remain in the realm of the metaphysical conception of things, you will have made *use* of the thing – –you will have put it to the work for which it was originated."

And so, considering *light* as a *thing*, science set to work.

The different sources of light are: the sun; the fixed stars; heat; electricity; chemical combinations; meteoric phenomena; phosphorescence.

The origin of the light of the sun and stars is unknown, but it is assumed that these bodies are enveloped by ignited gases, whose tremendously high temperature produces light.

This being true—and the comparison of light eminated by the sun and stars with light produced by heat corroborates this supposition—if this be true, we say, we shall class their light with the light produced by heat.

Increased

It has been ascertained that non-luminous bodies, placed in the dark, begin to become visible when their temperature is raised 500 to 600 degrees, and their luminosity increases with the increasing of the temperature.

Chemical

Light, produced by chemical combinations, is also due to the degree of temperature developed and temperature is the factor of most of the electric lights used for illumination

As these are the sources of light most used in photography, we will pass with silence the other sources and refer the reader to numerous and special literature on the subject if he desires to extend his knowledge that far beyond our present scope.

Motion Of Light

The sources of light being established, various attempts have been made to explain the *motion* of light, that is, to explain the way in which light travels from the luminous body to our eye, whether this body be the most distant visible star, the sun, or a small incandescent splinter of wood.

Of all the suppositions advanced as an explanation of this phenomena, the *"undulatory theory"* announced by the Dutch mathematician, Huyghens, in 1678, is generally accept-

(Continued on Page 16)

How to Edit the Amateur's Films

By H. Syril Dusenbery
(Chairman, Motion Picture Committee, California Camera Club)

Repeated Projection *and* Elimination *of* Static Matter Make Interesting Subjects

In amateur cinematography, the cinematographer, the editor, and the cutter are usually one and the same person. Much has been said as to what to take and how to take it but very little has appeared on what to do to improve the film once it has been returned from the finishing laboratory. While the suggestions that follow are primarily written with 16 mm. cine film in mind, they hold good for standard film as well.

Eager to See Results

The average amateur, when he receives his film back from the laboratory, is in feverish haste to project it. Once he has seen it, his friends are invited in to see it in a rush and little or nothing is done in the way of editing or cutting the film. By the time it dawns upon Mr. Amateur that his film could be improved upon, all concerned have seen the picture and it has been consigned away with hundreds of feet of other film where it is allowed to dry out and become brittle and perhaps be forgotten. Such is the fate of the average amateur reel.

The Difference

But the Exceptional Amateur, the one that gets the "interesting" pictures, the one whose pictures have snap—tempo as it is often called—the one whose pictures are viewed over and over and are carefully rewound and filed away in humidor cans, what does he do? He edits his film!

Minimum Equipment

The only piece of equipment necessary for successful editing is a good splicing block. The Bell & Howell Company have a combination rewind and splicing outfit that is excellent for this sort of work. Learn to make neat splices and make them quickly and then you are ready to start. Let us examine a typical reel.

The film is received from the finishing laboratory. It is first projected just as it is received so that you may get a general idea of what it contains. As the film is projected for the first time, note mentally the bad spots. Are there any spots under-exposed or over-exposed or out of focus? Which scenes are too long? Which scenes lack action and therefore don't mean anything? These are a few of the things that should flash through your mind when you view your own picture for the first time.

Second Projection

This done, immediately rewind the film and while its memory is still fresh in your mind, project it again. Have a pad of paper and a pencil before you during this second projection. Start the film the second time. Stop it immediately after the first scene is finished and make a few notes on your pad. If it cannot be improved upon in your estimation, jot down Scene Number 1, O.K. Start the projector again and view the next scene and continue this procedure scene by scene throughout the reel. Stop the projector after each scene, whether or not you believe you can improve it. Consider each scene carefully. It is a bit too long? Does it contain any dead spots wherein no action takes place. Take the time to think each scene over before starting the next scene. If there is any doubt in your mind at all, run the scene over again.

Sub Titles

Doubtless, during this procedure, certain sub-titles will suggest themselves to you. Jot these down indicating in your notes just where you think they belong. Also perhaps after you have viewed the reel for the second or third time, you will realize the order in which the scenes appear on the screen is not the best. Some particular scenes will be more effective if they follow a certain scene instead of appearing before that scene. This fact must be entered in your notes also. It is very necessary to project the film enough times so that you become perfectly familiar with it as the 16 mm. film is so small that it is not easy to follow the action on the film itself unless you know what it is all about. Once you become familiar with every little movement and motion, you are ready to begin cutting.

Action

Transfer your film to your rewind and splicing outfit and look Scene Number One over carefully. Do not keep more than two frames previous to where action starts. In most cases one frame is enough. By this I mean, for example, suppose you have a scene showing an automobile drive up, come to a stop and some people step out. You will doubtless have a foot or so of film before the auto puts in its appearance. Look over the film carefully and note the first frame in which the auto appears.

(Continued on Page 18)

Motion and the *Art* of *Cinematography*

By Slavko Vorkapich

Startling *and* Novel Ideas *on* Motion Picture Treatment Advanced *by* Student

(Slavko Vorkapich, celebrated Hollywood artist, delivered the following address before a recent open meeting of the American Society of Cinematographers:)

As foreword, I must tell you, that in this address the subject of Motion Pictures will be treated from a purely *artistic point of view.*

Therefore, the more practical side of it, the commercial value and the understanding by the public in general will be completely overlooked.

I will ask you, if I may, to forget, for a while at least, the business side of films, the box office and the appeal to the audiences, although we feel that, even among the public, there is an evident demand for "something different." And, who knows, perhaps the ideas here expressed, if properly realized, might some day prove even financially valuable.

However, a real *artist* works to satisfy his own taste first. And, if his work is sincere, the discriminating ones among the public will deeply enjoy the product of his effort.

Now to come to our problem:

Can a motion picture be a real work of art? By "work of art" I mean—an achievement comparable to masterpieces of all other arts; a motion picture that could compare, in its artistic value, to an Egyptian temple, to a Greek statue of Venus or Apollo, to Dante's Inferno, to Shakespeare's Hamlet, to the poems of Byron, to Mona Lisa, to Michael Angelo's frescoes, to Beethoven's Ninth Symphony, and so forth. Can we name one motion picture that has approached those masterpieces?

"Is it possible to make such a masterpiece in motion pictures, and *how?"* is the problem I should like to discuss with you tonight.

To know an art, we must know its tools, its material, its proper characteristics, its field of activity and its limitations. For that reason, we have to examine the possibilities of our new medium, the *cinema.*

From Photography

Cinematography has evolved fro mphotography. That is, maybe, why many have made the mistake to think of cinema in terms of photography. But still a greater mistake is to judge the cinema from the point of view of drama or literature. Why is it, that the people won't grant an absolute independence to this recent human achievement? This has been puzzling me, and I was unable to find an answer. Or, is the cause to be found in the well-known difficulty of the humans to adapt themselves to anything new?

Work of Art?

In order to clear the path to our investigation, I am going to make a radical statement: *A photograph can never be a real work of art.* A photograph can be pretty, pleasing, decorative, even beautiful to a certain extent, but never really artistic.

If you don't agree with me, make the following experiment:

Take the best photograph you can find and try to look at it for a long time, let us say, for half an hour. In the beginning you will be pleased with its appearance; but, the longer you look at it, the emptier it will appear to you.

Exhausted

You will realize that the first impression was only superficial. You will discover its lack of substance and of feeling. At the end of a few minutes, its contents, artistically speaking, will be completely exhausted.

Studying Old Masters

Now take a good painting by an old master, even a black and white reproduction of it, and look at it as long as you please. The experience will be the opposite to the previous one.

The longer you look at it, the more interest you will discover in it. In fact, a real masterpiece will begin to live and reveal its worth only after a certain time of observation. (This is the best way to test the value of any work or art) This is also true of good literature and good music. The oftener you re-read certain passages from Shakespeare or Goethe, the more you discover in them. Real art is like life and nature: inexhaustible in its contents.

Different

This experiment has convinced me that it is useless for photography to try to compete with art.

But *cinematography,* if properly understood, *can become an art.* We shall see, presently, why and how.

Most of you, here, being cameramen—(I don't like that name—cameraman. Another name should be used by those in pictures: like cinematographer, camera-artist, cinegraphist, or something like that)—being camera artists,

I presume you have the gift to visualize in your minds something that is described to you in words.

Now, visualize in front of you a blank screen. Suppose we project upon it any sort of still picture; be it a street, an interior, an insert or a close-up.

Only With Eyes

Look at the screen only optically, regardless of what the picture represents. If you look at it optically only, that is, with your eyes alone, and not with your minds, what will you see—different grades of light and darkness, spread over the surface of the screen.

Now, what would make this differently shaded surface beautiful—a perfect arrangement of these different patterns of white, gray and black, into a harmonious whole.

But can you realize such an arrangement on the screen just the way you would want to? No. An artist can do this on his canvas, because he can touch every square inch of it directly with his brush, pencil or hand. He can change, improve, correct, rearrange at will, until he obtains a satisfactory result.

But a camera has no feeling for selection. It cruelly registers everything it sees. You cannot put yourself between the lens and the film in order to eliminate or to soften only certain rays and to emphasize the others.

To a certain extent you are able to dominate the arrangement of light and shade *before* taking the picture, but to a certain extent only

Artist Has Advantage

An artist is a hundred times more the master of his manipulations. He is free to select, to modify, to emphasize according to his feelings and inspiration. That is why his final result is satisfying. It vibrates with life, it almost moves.

But a photograph, at its best, is still lifeless, compared to, let us say, a painting by Rembrandt.

Now let us return to our mental screen. We had projected on it, a while ago, a still picture—optically speaking, an immobile arrangement of light and darkness, in different degrees and in different shapes and patterns.

Begin to Move

Suppose now that these patterns *begin to move*. Our eyes will welcome the change. The shapes, the patches of light and shade, are traveling across the screen, they are growing or dimishing, they are melting into each other, they are disappearing and new ones appearing.

(Continued on Page 19)

One of the largest cinematographic staffs in the industry on the field of action on a Western location. Left to right: Dan Clark, A.S.C., chief cinematographer on Tom Mix features for Fox, and the other members of his staff—(third from left) Curtis Fetters, Roland Platt, Clay Crapuel, Griffith Thomas and Normal Duval. Clark was caught instructing his aides in the details of a scene that was just about to be taken.

A Cinematographer's Capital Investment

Cameras, Lenses *and* Special Equipment Represent Capital *of* Several Thousands

(The following interview, reported by the editor of the AMERICAN CINEMATOGRAPHER, *appears in the studio section of a current number of the* EXHIBITORS HERALD*):*

Progress shown by representative cinematographers in immediately adopting improvements in motion photography equipment is a decided factor in the steady advance in the refinement of the cinema, according to Daniel B. Clark, president of the American Society of Cinematographers.

"The cinematographer," Clark states, "never loses his imagination to newer or better things in the way of cinematographic paraphernalia. Our history shows that we have readily adopted and encouraged all meritorious devices that have presented themselves to our attention. This has meant much more than is apparent on the surface of things. Manufacturers of cinematographic equipment necessarily are not dealing in volume insofar as this particular trade is concerned. Hence, if the cinematographer had been content to follow the line of least resistance, if he had been content with old-line equipment and the results that such would obtain, we not only would have failed to bring about this wonderful progress in motion pictures; but, on the other hand, those creators of lenses and other items would have been discouraged in their efforts and would have had no incentive to spur them on to keep abreast of the ever-improving requirements of the cinematographer.

Expensive

"While this foresighted attitude has proved a boon to the art as a whole, it has, at the same time, worked a great expense on those cinematographers who are not fortunate enough to be identified with studios whose policy is to obtain improvements in equipment once they have proven themselves. Such cinematographers, in order to follow the natural bent for their calling, find it imperative to purchase, out of their own pockets, such new paraphernalia as they may find they need in order to give expression to the novel effects they have conceived for a given picture. While an era of admirable stability long since has been reached in the matter of the professional motion picture camera, expenditures on the part of the cinematographer for new types of lenses, irises, and the like, form a considerable portion of his salary—a portion that, in a couple of years, amounts to practically a dead loss. The reason for this is that the momentum of the progress which the camera artist has engendered in this profession is so great that the rapid changing of demands makes a type of lens, for instance, that is 'the thing' as of today is obsolete in a couple of years.

Capital Investment

"In the case of the freelance cinematographer especially," Clark concluded, "his salary covers not only his artistry, skill and service, but really covers an investment as well—an investment which, comprising cameras, magazines, lenses and so on, amounts to several thousands of dollars. Therefore he has a right to expect to be reasonably rewarded for his services. Fortunately, the larger studios long ago recognized the economic wisdom of maintaining their own cinematographic equipment, and, in addition, in always ascertaining the cinematographers' recommendations so that their outfits may always be kept up to date."

Junior Cameramen's Club Members Swap Jobs; Go Away *on* Locations

Ira Hoke and Cliff Shirpser have left for San Antonio, Texas, on location for Lasky's forthcoming production, "Wings." Ira is cranking John Boyle's patented Bell and Howell — Akeley combination camera while Shirpser is assisting. It is expected that both of the boys will put in a lot of time in the air.

* * * *

Billy Reinhold and Gregg Toland have traded jobs. These two popular members of the Junior Cameramen's Club are considered the foremost and highest salaried assistants in the business. George Barnes, A. S. C., now has Gregg Toland as assistant and Arthur Edeson, A. S. C., has Billy Reinhold.

* * * *

It is said on the Fox lot that Frank Powolney is turning out one of the best set of stills that has ever been accredited to a production for a forthcoming Fox picture, "Mother Machree."

* * * *

David Ragin and Max Cohen have returned from location at Carmel, Calif. Dave says the spot is very romantic. Max says "Uh-hu."

Eastman Panchromatic Negative Film for Work in Black and White

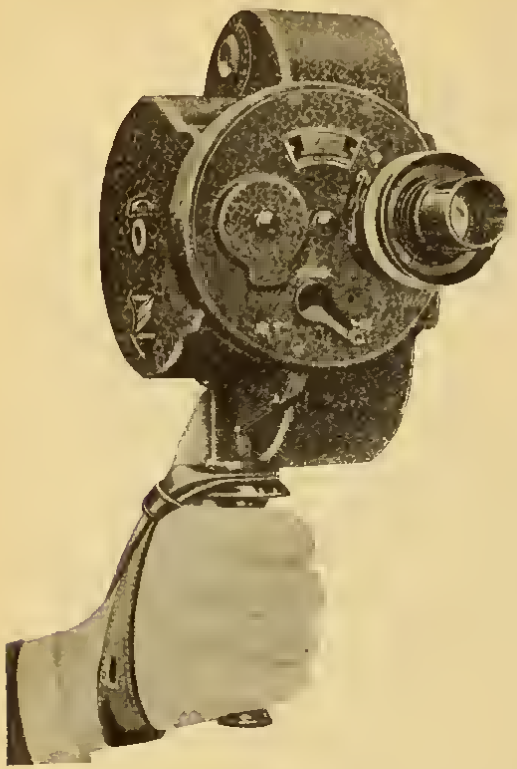
EVEN AT ITS FORMER PRICE of 5 cents per foot, the sales of Panchromatic Negative have trebled in a year because many users found that those very qualities of color sensitiveness that made it an essential in color work made it also the most desirable for black and white.

AT THE NEW PRICE, 4 cents per foot, it is our belief that Panchromatic Negative, because of its perfect rendering of the finer color values, is bound to take the place of ordinary negative for practically all classes of work.

The results are apparent on the screen—and that's what really matters.

EASTMAN KODAK COMPANY

ROCHESTER, NEW YORK



"Greater fle
the action in clo

Sept. 11, 1926.

Bell and Howell Co.,
Chicago, Ill.

Dear Sirs:

I am sure you would be interested to know the important part that the EYEMO Standard Automatic Camera played in the photographing of the motion picture, "One Minute to Play," featuring "Red" Grange. Many of the most thrilling scenes of the football game were made with the EYEMO, as well as the mobile and stationary shots throughout the picture.

Mr. Sam Wood, the director, was particularly pleased with the results obtained. Its use gave him [illegible] the action [illegible] ing confine[illegible]

The phot[illegible] made with [illegible] your manuf[illegible] gles that t[illegible] in the prod[illegible] of operatio[illegible] meet all re[illegible] heartily re[illegible]

I am ver[illegible] production [illegible] have made[illegible] close-ups [illegible]

MAKES MOVIES AS THE EYE SEES

Eyemo

REGISTERED

Standard Automatic Professional Camera

for field and stunt use

This shows how easy Eyemo is to handle and operate. Simply sight through the spy-glass viewfinder and press the trigger. Eyemo uses standard film, 100-ft. daylight loading rolls or 120-ft. darkroom load. Two mechanisms available, each adjustable to two speeds: 1. Normal and half normal; 2. Normal and double-speed. Full specifications given in literature the coupon will bring. Mail it today.

Mail this for more information

BELL & HOWELL COMPANY,
1805 Larchmont Ave., Chicago, Ill.

Please send me your special circulars describing the *Eyemo* Camera and its uses.

*Name*_____

*Address*_____

STANDARD
BELL & HOWELL COMPANY
CINEMACHINERY

BELL & HO[illegible]

1805 LARCHMO[illegible]
NEW YORK—[illegible]
[illegible]

xibility in photographing

e shots"—Read this letter!

flexibility in photographing
shots, without the actors he-
finite places.
e quality matches the scenes
000.00 professional camera of
and a few of the unusual an-
able camera permits are seen
All this, beside its simplicity
refined workmanship surely
ents of the most exacting. I
ıd it.
my EYEMO on my current
x films, "Going Crooked." I
under-sea scenes and some
Bessie Love swimming—the
camera held just above the surface preceding her as she swam. These were only possible with this type of camera.

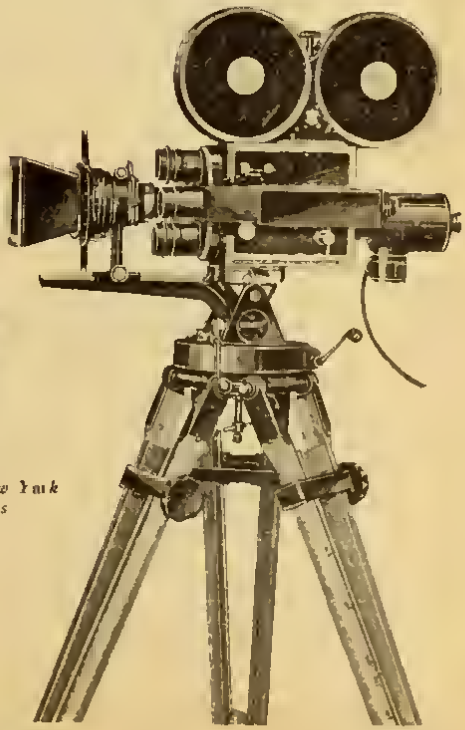
The industry is indebted to the Bell and Howell Company for creating a tool that so broadens the scope of picture telling. Still greater is the fact that everyone can now make good motion pictures with this instrument, and in addition to the scenes of a personal nature that will be made by the amateur, a great many will be made of historical record and that have general interest to the public, and can be profitably marketed.

Wishing you every possible success,

CHAS. J. CLARKE.

Photographing "Red" Grange
in
"ONE MINUTE TO PLAY"

Displays at our Hollywood, Chicago, New York and London Offices



For making *personal* movies which are fully up to professional standards, use the Bell & Howell

Filmo

Motion Picture Camera and Projector

THE PIONEER

The Bell & Howell Company are pioneers in the motion picture industry, having by superior design and construction brought about the present standardization of producing equipment.

The illustration below shows one of the late Bell & Howell professional studio cameras used almost exclusively by the foremost producers the world over. Eyemo standard portable camera is rapidly gaining the same reputation for superiority in its field.

ELL COMPANY

AVE., CHICAGO, ILL.
LYWOOD—LONDON
shed 1907

WHETHER for interior or outdoor shots, Zeiss Lens equipment on your camera insures results. No matter how thorough your methods, how good your lighting or how elaborate your settings, the final result will be better—whenever and wherever Zeiss Lenses are employed.

CARL ZEISS, Inc.
485 Fifth Ave.,
New York
(**Formerly H. M. Bennett**)

A NEW LENS
"That has made good"

Large aperture F:2.3. To a large exteot responsible for the Bas-relief, or solid appearance of the subject on the screen
Good definition over the entire field, yet not harsh or wiry.
A portrait lens in short focal lengths 40mm, 50mm, 75 mm,, with full closing diaphragm
Price is reasonable

40mm	$50.00
50mm	50.00
75mm	SS 00

A Trial Will Be Satisfying
ASTRO-GESELLSCHAFT, mbh., Berlin
FOR SALE BY
MITCHELL CAMERA CORPORATION
6025 Santa Monica Blvd. Los Angeles, Calif

AMATEUR CINEMATOGRAPHY

(Continued from Page 9)

ed because of the number of optical phenomena that can be explained by it.

Science is very exacting in its definitions and Huyghens' explanation is still called a *theory,* or supposition, because its truth has not been proven by material facts.

According to the *undulatory theory,* all spaces and bodies *within* and *without* the earth's atmosphere, are filled with an extremely elastic fluid called *ether.*

Ether, supposedly pervades all interstellar spaces, and exists between the molecules of all substances, from the rarest of gases, to the densest solid in existence.

A luminous body communicates to the ether the extremely rapid vibrations of its molecules, and these vibrations are propagated in all directions by ether, in an *undulatory* motion, very similar to the ripples produced on the surface of stagnant water, by a rapid shock or disturbance, as caused for example by a pebble or stone thrown in a calm pool.

The rapidity of the ether luminous waves is prodigious, and the length of the undulations or vibration is infinitesimally small.

It is of great interest, to compare the ether undulations producing light, with the undulations producing other physical phenomena.

Sound. for instance, is produced by undulations produced in the *air,* very similar in their departments to the ether undulations

This similarity is, in fact, one of the strongest arguments brought forth in the discussion of the truth of the *undulatory theory.*

When striking the legs of a diapason, or tuning-fork we actually see the rapid vibrations of the instrument.

These vibrations transmitted to the surrounding air produce a *sound.* If we touch the legs of the diapason with the hand, we stop the vibrations of the instrument, and sound ceases.

As the amplitude of the sound waves produces a difference in the intensity of the sound, so the difference of amplitude in the light waves produces a difference in *color.*

Apparently, light of all colors, is transmitted at the same velocity *in vacuo,* even in *air,* the difference of velocity in these two media

being so small that it cannot be detected by man, but this difference of velocity is readily visible in denser media, which fact will be thoroughly investigated in the course of this study.

The velocity and length of undulations, being greater for the red light, correspond to a deep sound, while coming down through the series of visible colors to the *violet,* we find these shorter and slower undulations, to correspond to a sound of high pitch.

The phenomena of *heat* is also very closely related with the phenomena of light, and we speak of a caloric ray, in the same manner and with the same meaning as we speak of a *ray of light.*

Heat, is, as light, theoretically transmitted by undulations of the ether and the greater the velocity of heat undulations, the greater is the sensation of heat.

A remarkable, palpable evidence of the possible truth of the undulatory theory, is given by the fact that if we decompose white light into its composing colors (Rainbow) and with a delicate thermopile we ascertain the difference of heat produced by each colored light, we find the thermopile scarcely affected by the *Violet,* but gradually indicating an increase of heat in the Blue, Green, Yellow, Orange respectively, up to the Red, at which color the temperature is greater, indicating thus a greater velocity of the heat undulation, just as a greater velocity of the light undulations has been proven to exist for the red than for all other colors.

Ether undulations, producing different phenomena, have been measured with great accuracy, and their length varies from the longest known radio waves, having a length of 40,000 meters, to the recently discovered cosmic rays whose length has been measured by Prof. Millikan of the California Institute of Technology and found to be 0.000,000,000,040 millimeters.

According to the undulatory theory, a disturbance, originated at any point of the ether by a luminous body, is propagated as a spherical wave in all directions around that point, and its velocity is uniform.

Now, if we consider one point of the eye or of an optical instrument, turned towards the origin of the disturbance, we can visualize the particular part of the light-wave that strikes that point, and call it a *ray of light.*

It is of great importance for the student to have a correct conception of what we call a

(Continued on Page 30)

BUY CHRISTMAS SEALS

and help us to keep you healthy

THE NATIONAL STATE AND LOCAL TUBERCULOSIS ASSOCIATIONS OF THE UNITED STATES

PARIS
BRUSSELS
VIENNA
ROME
MADRID
LISBON
JERUSALEM
LONDON

RENE GUISSART

Atmospheric Shots in Any Part of Europe

Taken according to your own instructions in an artistic manner to match the photography of your production.

OFFICIAL CORRESPONDENT IN EUROPE FOR
American Society of Cinematographers; Frank D. Williams

118 Avenue des Champs-Elysees
PARIS
Cable Address.
LOUVERANDE PARIS

BERLIN
BUDAPEST
GENEVA
CAIRO
ATHENS
ALGIERS
ETC.
ETC.

HERFORD TYNES COWLING
A. S. C.
FREE LANCE
CAMERA SPECIALIST
AKELEY—EYEMO
Bell and Howell
Complete Equipments
Extra Assignments Solicited

114 Market St.
SUFFOLK, VIRGINIA
Tel. Suffolk
556-J

Cere
Ewing Galloway
15—East 40th St.
New York City
Tel. Meury Hill
4711

FOR RENT

Two Bell & Howell Cemeres—40, 50, 75 mm. lenses-Thelhammer Iris. Jeenne Trebeol, 10042 Stilson Ave., corner of Clariogton, Pelms, Celil. Phone: Culver City 3243.

EDITING AMATEUR FILMS

(Continued from Page 9)

Leave one or two frames before this and cut the balance way. After the car comes to a stop there will be a brief pause before the people alight. If this pause amounts to more than two frames, cut the balance away. Continue this procedure for each scene cutting away every inch of film that lacks action. This is slow work but the results will amply repay you for the time and trouble that you made during the projection of the reel. Bear in mind that you only do your cutting and editing once—after that you will show your films many many times.

Sequence

Scenes that are out of their proper order should be bodily cut away and after carefully editing they should be spliced back into their correct position. Make your scenes follow each other in a logical sequence even if they were not taken that way originally.

Photographical defects such as under-exposure and over-exposure should also be edited out. Blurred scenes caused by too rapid motion close to the camera should also be cut away Remember it is far better to show a short pleasing reel than it is to show a long reel full of waits and delays and photographical defects.

After you have completely gone through the reel, you are ready to project it once more. Note the improvement. It will surprise even yourself. Perhaps in the editing process you skipped a scene. Stop your projector at once and cut it properly right then and there. Don't slop through this work and think that a particular scene will get by without editing. Rarely is a scene so perfect that you can project it just as it comes out of the camera. Editing at best is slow tedious nerve-racking work. Take your time, be patient and you will find the results well worth while.

* * * *

David Abel, A.S.C., is photographing "Wolf's Clothing," a Warner Bros. production starring Monte Blue.

Lighting *and* Posing Exhibition Held *by* Institute *of* Photography

Inaugurating a series of free lectures and demonstrations for the public, a highly interesting and successful exhibition of artistic lighting and posing was recently given in the large portrait studios of the New York Institute of Photography at 10 West 33rd Street, New York, N. Y. The demonstration was given personally by J. C. Neely, who is on the staff of the Eastman Kodak Company. The seating capacity of the big double studio was taxed to the limit and despite the fact that a large number of late comers were compelled to stand, every member of the audience was held to the very end.

Neely not only showed how modern lightings are done, but also revealed many secrets in the use of draperies, panels, shadow and spot lightings and artificial flowers to obtain unusual and striking background effects. A number of specimen negatives weremadewith attractive living models and will be used for a later demonstration on developing and printing methods to be held at the New York Institute of Photography.

Motion *and the* Art *of* Cinematography

(Continued from Page 11)

The screen seems to have become, optically, alive. Evidently, a new element of life has been introduced. What is the name of this new element? Motion.

Still, optically speaking, this mere change of pattern in front of your eyes possesses now something that even a painting by Rembrandt does not possess: *Actual motion,* a moving play of light and darkness upon the screen. Well, this is *cinematography.*

Here we have found the key to the understanding of our new medium. *Motion* is what makes it different from photography or painting. A photographer thinks in terms of static, immobile, composition, but a *cinema*tographer must think in terms of motion.

Bromide?

You will say: this is nothing new. Everybody knows that the moving pictures move.

But let us again return to our imaginary screen. The patterns of light and shade upon it are moving now. If they were moving in a confused and meaningless fashion, would that make them artistic?

Synchronizing

No. It would be like sitting by the piano and pounding at the keys in any old way. Consequently, motions, like the sounds, have to be selected and then harmonized or synchronized, in order to produce a pleasing effect.

I hope I am making my meaning clear, when I say that photographing any action at random is not cinematography, as long as its *motions* are not optically satisfying, when shown on the screen.

No matter how good-looking the actor or the actress is, and no matter how wonderful his or her acting, it will still be *only a photograph* of the actor and his acting, if at the same time there is no motion that has cinematographic value.

I wish I were a master of words to make you realize the immense difference between photography and cinematography.

But let me give you a concrete example:

You all have, I hope, seen "The Last Laugh." Take the very first scene of the picture. The camera, evidently, represented one of the hotel guests. It was placed in the descending elevator and looked down into the lobby. The descending motion of the elevator, the people coming in and going out of the hotel, the revolving doors in the middle distance, the people walking on the wet pavement outside, the cars and busses passing in the background.

Cinematography

It was a real symphony of motions. It was not confusion. There were five or six distinct motions, very well synchronized. Optically speaking, rhythmically moving and changing patterns on the screen were pleasing and intriguing to the eye; mentally speaking, the picture gave a living, pulsating impression of a hotel. The atmosphere was expressed in terms of motion. It was eloquent and artistically true.

(Continued on Page 22)

More to it than
the public realizes—

THE public knows a good picture when it sees one—you can bet on that! What it doesn't know is the technique, photography, and lighting that makes it what it is.

But we who are "behind the scenes" know! We see the Cooper Hewitts working day and night alike. We see outdoors moved indoors. But even we are inclined to forget that the "Coops" first made it possible. The "Coops" are always ready to serve you. Call up "Mike" Shannon and he'll see that they do.

COOPER HEWITT ELECTRIC CO.
HOBOKEN, NEW JERSEY

HOLLYWOOD OFFICE—7207 Santa Monica Blvd.
KEESE ENGINEERING CO., JOHN T. "MIKE" SHANNON, MGR

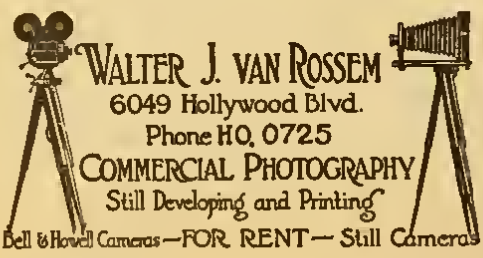
149 © C H E Co 192-

Roy Davidge
Film Laboratories

The Little Laboratory
with the Big Reputation

6701 SANTA MONICA BLVD.

HOLLYWOOD 1944



ray of light.

When the light of the Sun is permitted to pass through a minute orifice, drilled in the wall of a dark chamber, and a thin cloud of smoke is formed in the chamber, a streak of light is made visible, which streak we commonly call a *ray* of light.

In fact, this streak, no matter how small the orifice may be, is composed of a number of rays, limited by the size of the orifice itself, and it may readily observed that these rays diverge from each other, forming on the wall of the chamber, opposite to the opening, a sunspot larger in size than the orifice.

These rays, may be made to take a course parallel to each other, or to converge to one point, by forcing them to pass through lenses of suitable form.

Such an agglomeration of rays, is called a *"beam" or "pencil"* of light, and may be parallel, divergent or convergent, according as to whether the rays composing it are parallel to each other, or if they separate from each other, or converge to a same point.

A *"ray of light,"* is then an imponderable, immeasurable entity of light, representing the *direction in which light is propagated, in reference to the observer or optical instrument; and marking the shortest distance between the luminous point and the receptive point.* Now, the shortest distance between two points being a straight line, we can conceive this *direction* as a "geometrical straight line."

As the undulatory theory infers the existence of undulations, we shall conceive them as having a bearing on the velocity of light, but none on its direction.

It has also been ascertained that the velocity of light varies with the wave-length, this velocity being greater for the red rays and gradually diminishing for the rays of the different colors from red to violet.

It is evident that it becomes necessary to consider the velocity of light and its color, beside the "geometrical conception" of a *ray of light;* we can arrive at the definition of a *ray of light* as *"the direction in which monochromatic light is propagated from one luminous point to a given receptive point."*

"Monochromatic" is a word derived from the Greek words *monos*, sole, and *chroma*, color, that is to say: *light of one color.*

Substances that readily permit the transmission of light are called *transparent.* Substances that do not permit the transmission of light, are called *opaque.*

Perfectly transparent, as well as perfectly opaque bodies, do not exist. Consider, for instance, water as a highly transparent body. A sufficient quantity of water is quite impenetrable by light, and on the other end, if we reduce gold, the most ductile of opaque bodies, to a very thin leaf, we notice that it transmits green light.

These facts are well in accord with the undulatory theory, which states, that *ether exists between the molecules of all substances*

Other substances such as ground glass, porcelain, etc., transmit light, but are not transparent in the common sense of the word, as one cannot see objects through them. These substances are called translucent and the phenomena is caused by the diffusion and scattering that light undergoes in the interior of these substances.

Calling *media* the subtances that transmit light, we can readily understand, that the velocity of light within them, is regulated by their molecular composition. We can then conclude that *"A ray of light travels in a straight line in a medium whose composition is equal in all its parts, but its velocity varies according to the density of the medium."*

A ray of light, will then travel at its maximum velocity in the medium *vacuo.* Its velocity will be less in the medium *air*, still less in the medium *glass*, less yet in the medium *diamond*, which is the densest of all transparent media

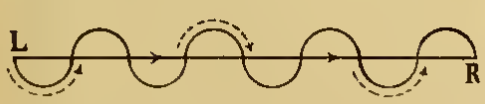


Fig. 1.

L equals Luminous point.

R equals Receptive point.

Straight line LR equals geometrical conception of ray

Curved line LR equals wave undulation

Direction, from left to right as pointed by arrows.

Supplied as special equipment on DeVry and other M. P. Cameras $60

The ULTRASTIGMAT-f 1.9

Since 1884, manufacturers of fine View Cameras and Lenses. Write for complete catalogue of fine apparatus for the Still Studio.

GUNDLACH-MANHATTAN OPTICAL CO.
900 Clinton So., Rochester, N. Y

Subscribe to
American Cinematographer

4 in. Iris Combination and Sunshade
Trueball Tripod Head
FRED HOEFNER
Cinema and Experimental Work
5319 Santa Monica Blvd. (rear)
GLadstone 0243 Los Angeles, Calif.

SCHEIBE'S PHOTO-FILTER SPECIALTIES
Are now popular from coast to coast, and in some foreign countries.
If my many varieties do not always fill the bill, tell me your wants and I will make them on special order.
Always at Your Service
GEO. H. SCHEIBE
1636 Lemoyne St. DUnkirk 4978 Los Angeles, Cal.

FOR RENT
BELL - HOWELL AND AKELEY CAMERAS
(with or without Cameramen)
SEIDEN CAMERA EXCHANGE
729 Seventh Ave. N.Y.C.
Bryant 3351

Wire us for any New York Scenes you may need
Prices Reasonable

CLUBBING OFFER

Subscribed for separately, Camera Craft, and the American Cinematographer will cost a total of $4.50 per year. As a special clubbing offer, both magazines may be had at a total price of $3.40 per year.

American Cinematographer
1219-20-21-22 Guaranty Bldg.
Hollywood, California

E. Burton Steene

Freelance

Akeley

and Eyemo

Camera Specialist

GRanite 1622

Care of American Society of Cinematographers
1219-20-21-22 Guaranty Bldg.
HOLLYWOOD, CALIF

GRanite 4274

CRECO

HARRY D. BROWN
Cinema Studios Supply Corporation
1438 Beachwood Drive
HOlly 0513
HOlly 0814
Brown-Ashcraft Studio Lamps
Carbons and Other Studio Equipment

FOR RENT
Mitchell and Bell & Howell Cameras
F 2.3; F 2.7; F 3.5 lenses; 40, 50, 75 mm.
Complete Equipments
Now Available in Hollywood at
Cinematograph Film Laboratories
861 Seward Street HOllywood 0764
J. R. LOCKWOOD
523 N. Orange Street Glendale, Calif.
PHONE GLENDALE 3361-W

(Continued from Page 19)

This, I call *cinematography.*

Now, for contrast, take any average picture showing a hotel lobby. The camera is fixed in a corner to take in a long-shot of the whole set. The pillars, the stairway, the desk, the furniture, everything is there, very well composed, if you will, but static. Some people are seated, some are walking across the lobby, some are going up or down stairs. Everything looks true to life, yet something is lacking. The set is beautifully lighted, there is plenty of action, but they were done without thinking of the optical moving pattern, or considering whether those movements in all directions will *synchronize* when shown on the screen.

This is still *only photography,* and not cinematography.

I hope that I have made clear the difference between these three things:

First, Still photography;

Second, Photography of actions and acting; and,

Third, *Real cinematography.*

(And I hope also that you have, with me, come to the conclusion that, if cinematography is going to be an art at all, it will be primarily an art of motions).

The very name of your profession indicates its real function: *motion pictures.*

Knowledge is acquired through study. An original artist draws his knowledge from life. The subject of our study being motion, let us open our eyes to the motions we see around us in everyday life.

Suppose you let a friend take you for a ride through Hollywood. While your friend is driving, you watch out for all the motions, seeming and actual. Seeming, or apparent, motions would be: Buildings, trees, telephone-poles coming toward you and growing at the same time; distant skyscrapers showing first one of their sides, then, as you approach them, gradually growing and revealing their fronts, as if revolving around their vertical axes, then suddenly disappearing from the field of your vision, unless you turn around, which would give a novel and interesting combination of motions.

If you tell your friend to turn to left or right, you will see at least two of the corners of the street gracefully swinging around you, until you come to face a new street.

Actual Motions

Now watch out for all the actual motions: The people on sidewalks going in opposite directions and in different tempos, the cars and street-cars going ahead of you and almost keeping their relative proportions, while those coming toward you are doubly growing, through their own effort and because of your approach . . . the cars at intersections going in different tempos in directions perpendicular to your own, or turning the corners and thus changing their directions by describing a quarter of a circle, perhaps a man disobeying the traffic rules and crossing the street diagonally, in the meantime rolling a spare tire . . . the policeman in the center of the crossing, revolving around his vertical axis, barber-poles doing a similar motion but without pause, an organ-grinder cranking the handle around its horizontal axis, a page of a newspaper, blown by the wind, going in unexpected directions and revolving around unexpected axes . . . a door or a window opening or closing, a revolving hotel entrance, less cadenced than the traffic policeman and more varied than the barber-pole in the tempo of its motions, and above the street the smoke, the clouds and perhaps a bird, much freer and more graceful in its movements than the creeping things below

If you are not dizzy, take a ride on the beach and you will behold many more motions: of the waves, boats, hydroplanes, swimmers, seagulls, and then those diabolical devices made for "amusement." If you have the nerve, take a ride on one of those unnamable three-dimensional curves and watch how the world will look to you. Why, the thing is symbolical of life itself, with its pleasant going-ups, its suicidial going-downs and the final: "Thank God, it's all over now" . . . Well, this should have been a great lesson in many ways.

(Continued Next Month)

LEITZ DISTANCE METER
"FODIS"—PHOTO-TELEMETER

Completely solves the biggest difficulty in hand camera work.
"A necessity for the Cinematographer."
For hand cameras, $11.00. For Motion Picture Cameras, $15.50, in genuine leather case.

Write For Pamphlet No. 2090

1. "FODIS" is the only reliable Photo Distance Meter. Absolutely accurate.
2. Determines distance of objects automatically. Simple in use.

60 East E. LEITZ INC NEW YORK 10th Street

WESTERN AGENTS—SPINDLER & SAUPPE
86 Third Street
SAN FRANCISCO, CALIF.
California, Washington, Oregon, Idaho Utah, Montana and Arizona

SAVE MONEY
BY INVESTIGATING
AMERICAN CINEMATOGRAPHER'S
Clubbing Arrangements
with
CAMERA CRAFT
and
PHOTO-ERA

CINOPHOT

The Automatic Exposure Meter for the Movie Camera

Patented by Dr. Emil Mayer

Automatic—scientifically exact under all light conditions. Gives correct diaphragm settings for sun and twilight, outdoors, studio, natural or artifical light. Adjustable for individual vision. Always ready for use.

The CINOPHOT saves film waste and disappointment. Price in fine sole leather case,

$12.50

Chas. G. Willoughby, Inc.

110 West 32nd Street New York, N. Y.

AMERICAN CINEMATOGRAPHER,
1219-20-21-22 Guaranty Bldg.,
6331 Hollywood Blvd., Hollywood, Calif.

Gentlemen: Please find enclosed three dollars (foreign rates additional), for one year's subsaription to the AMERICAN CINEMATOGRAPHER, to begin with the issue of

, 192

Name

Address

Town

State

(Note: Camera Craft or Photo-Era will be sent for a slight additional sum Consult the clubbing offers.)

ALVIN KNECHTEL ELECTED *to* A. S. C.

(Continued from Page 4)

stationed in Los Angeles for permanent headquarters.

Notable Work

While with Pathe, Knechtel evolved a method of producing multiple image and trick novelty photography which has been featured by Pathe during the past two years, in which period the new A.S.C. member has been concentrating on this particular type of work which, by special arrangement, will be continued by Pathe who have acquired the cinematographer's rights thereto.

Subjects

Among the subjects which have been photographed by Knechtel are: "The Mysterious Browning," "The First Woman" and "Is Money Everything?" for Hammond Productions in Detroit; "Beneath the Southern Cross," "The Dream Isle," "The Deep Sea Harem," "The Eighth Art," "The Wiggle Works." "The Hook Hunters of Hawaii," "The Silk Moth," "Flying over Hawaii," "The Pets of the Pacific," "Growing Cherry Coffee in Hawaii," "Speak-easy Speed," "The Phantom Ballet," "The Pearl of the Mid-Pacific," "The Pride of the Plantation," "Hot Dog." "The City of the Angels," "Magic Minnie." "Sea and Sundown," "The Last of the Hawaiians," "The Sweetheart of Hawaii," "The Mystic Menagerie," "Acrobatics a la Mode," "The Two-legged Horse Race," "Spartan Sports," "The Cauldron of Kilauea," "Twinkling Toes," "Our Gang at Home," "Fact and Figure," "The Sylph of the Sea," "Making Over a Metropolis," "Circus Secrets," "On Thin Ice," "Springboard Fever," "The Wallop Works," "The Scrambled Scrapbook," "Beyond the Purple Pool" and "Steps from the Steppes."

Carl Zeiss, Inc., Move *to* Larger New York Headquarters

Carl Zeiss, Inc., have moved to newer and more modern quarters at 485 Fifth Avenue, in New York City.

The change comes as a result of the continued growth of the firm, which does a world-wide business in photographic, cinematographic and kindred lines

CLASSIFIED ADVERTISING

RATES: *Four cents a word. Minimum charge one dollar per insertion.*

All copy must be prepaid and must reach us before the fifteenth of the month preceding publication.

CLASSIFIED ADVERTISING
AMERICAN CINEMATOGRAPHER,
1222 GUARANTY BUILDING,
HOLLYWOOD, CALIFORNIA

WANTED—MOTION PICTURE CAMERA

WILL PUT you in touch with buyers for Bell & Howell cameras and equipment. Phone or write the A S C 1222 Guaranty Bldg Granite 4274 Hollywood California

FOR CASH used Bell & Howell camera and tripod Lenses and mounts not essential Low price and good mechanical conditions are chief requirements Jay Falk 10 West 33rd St, New York, N Y

FOR SALE—CAMERAS

BRAND new Eyemo camera, complete with extra magazines, carrying case, etc, $300 00 Also almost new Universal camera built-in dissolve carrying case extra magazines and new Burke and James tripod, $325 00 Frank King 36 Crestwood Avenue Buffalo, N Y

BELL & HOWELL Eyemo Camera—3 5 lens, Color Filter Case Six 100 ft reels, Daylight Negative Cost $400 00, Price $275 00 All Brand New Camera Manhattan Beach N Y

FOR SALE—LENSES

ONE three inch Dahlmeyer F 1 9, mounted for Mitchell; one two-inch Beusch & Lomb F 2 7, an Dahlmeyer Pentac 37 mm F 2 9 Georges Benoit, 845 Crescent Heights Blvd Hollywood Calif

CARL ZEISS F 2 7 50 mm in Bell & Howell mount. Dan Clark, care American Society of Cinematographers

NEW 40 mm Goerz Hypar f 3 5 lens in Bell & Howell mount, price $50 00 Write Charles Clarke 1222 Guaranty Building Hollywood California

FOR RENT—CAMERAS

FOR RENT—Bell & Howell studio equipment complete 170 Degree Shutter Liberal commission to cameramen Call Mr Smith Metropolitan 4686 Evenings call Main 0947 (Los Angeles)

AKELEY and Bell & Howell cameras for rent. John Boyle 1207 Milton Ave Phone Granite 2213 Hollywood California

BELL & HOWELL Victor Milner 2221 Observatory Ave, Los Angeles California 596-044

MITCHELL and Bell & Howell Cameras F 2 3 F 2 7, F 3 5 Lenses—40-50-75 mm Complete equipment J R Lockwood 523 North Orange St Glendale California Glendale 3361 W or HOlly 0764

E BURTON STEENE Bell & Howell, and Akeley Complete Camera Equipment Latest models Address American Society of Cinematographers Hollywood California

BELL & HOWELL 170 with 30 40 50 and 75 lens equipment Baby Tripod Also B & H Cine Motor Charles Stumar GRanite 9845 1201 Vista Street Hollywood

FOR RENT—One Eyemo camera, complete with all accessories Bert Glennon, 5905 Carlton Way Hollywood, California Phone Hempstead 2743

FOR RENT—STILL CAMERAS

WILL RENT still camera to local parties Special arrangements to A S C members Geo Meehan, Ph GRanite 3830 744 Curson Ave Hollywood California

FOR RENT—One 4x5 Graflex Camera and one 4x5 Graflex Bert Glennon 5905 Carlton Way Hollywood California Phone Hempstead 2743

FOR RENT—AIRPLANES

AIRPLANES equipped to carry cameras, facilitating the photographing of stunts or other unusual action for rent by the hour, day or week Jerry Phillips Professional Pilot Clover Field Santa Monica California

WANTED—POSITION

AMATEUR PHOTOGRAPHER will give services in return for practical experience W T Henry 961 Magnolia Ave Los Angeles Calif

FOR SALE OR TRADE

ONE Universal Camera, (400-foot model); 8 magazines cases and trunk Masks, Lens Beusch and Lomb 2 inch focus Two Klieg lights, 100 feet of cable and spider box Wanted an Eyemo camera Chas E Carruth Denton Texas

Dignity
in
Advertising

Espousing the aesthetic as well as the practical progress of the art of cinematography, the American Cinematographer has, through the prestige of its advertisers and contributors, gained an enviable place in the realm of dignified advertising.

The psychology of dignity in compelling attention which directly breeds the confidence of the reader is evinced in the high grade 'copy' which is the consistent characteristic of the advertisers using the American Cinematographer in the field of cinematography.

Camera Craft
and
American Cinematographer

may be had on a special one year's clubbing subscription at a very substantial saving. Separately, the two publications cost a total of $4.50 per year. By virtue of the clubbing offer, both may be had for $3.40.

Announcing

a new

Clubbing Arrangement

between

Photo-Era *and*

American

Cinematographer

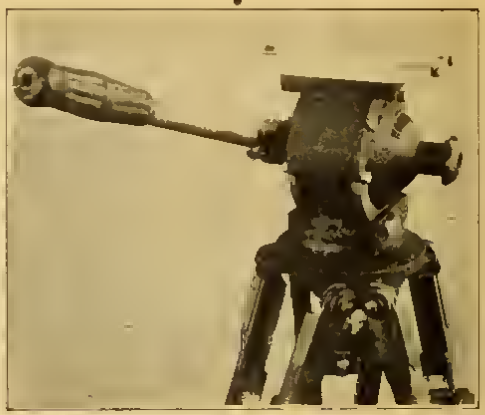
To serve its readers, this publication has effected a clubbing arrangement with Photo-Era on the following basis:

Regular Rates per Year:

Photo-Era	*$2.50*
American Cinematographer	*3.00*
Total for Both	*$5.50*

By virtue of the new clubbing offer, both publications may be had, for one year, for

$4.15



View of Hoefner's true-ball tripod head for professional cameras.

Trueball Tripod Head *for* Studio Professional Cameras Is Invented

A new tripod head for professional motion picture cameras, known as the "Hoefner Trueball Tripod Head, Model B," has been placed on the market by Fred Hoefner, well-known Hollywood precision mechanic.

The new head is a companion creation to Hoefner's "Model A," which, announced in the June issue of this publication, was designed for amateur cameras, among the users of which it has found a wide demand.

Operating Principle

As with the amateur type, the Model B works on the true-ball principle.

"This is the only way," Hoefner states, "that more than one required motion can be made to move simultaneous, making the motion continuous and the tension equally maintained, for the following of a moving object—as there is only one side or surface to a ball.

"Among the other features are: By turning a hand screw, the pan is locked and the tilt moved through a ninety-degree arc; and, by reversing the action of this screw, the tilt is locked and the pan action released. Also, the whole head may be instantly locked, making it more rigid. The drag tension may be adjusted to suit the operator. The operating handle is removable and telescopic. It is adjustable to any angle and length required."

How to Locate Members of the

American Society *of* Cinematographers

Telephone: GRanite 4274

OFFICERS

DANIEL B. CLARK	*President*
L. GUY WILKY	*First Vice President*
FRANK B. GOOD	*Second Vice President*
IRA H. MORGAN	*Third Vice President*
GEORGE SCHNEIDERMAN	*Treasurer*
CHARLES G. CLARKE	*Secretary*

BOARD OF GOVERNORS

Victor Milner	Alfred Gilks	Fred W. Jackman
Daniel B. Clark	Charles G. Clarke	Reginald E. Lyons
George Schneiderman	Glen MacWilliams	E. Burton Steene
L. Guy Wilky	Homer A. Scott	Ira H. Morgan
Frank B. Good	King D. Gray	Floyd Jackman

Abel, David—with Warner Brothers
Arnold, Jesse—with Metro Goldwyn Mayer Studios

Binne, George S.—with Henry King, Samuel Goldwyn Prod.
Bickwell, Wm.
Bennett, Gentle—with Metropolitan Production, Metropolitan Studios
Boyle, John W.—With First National, Burbank
Brodin, Norbert F.—with Frank Lloyd Productions, Famous Players-Lasky
Broening, H. Lyman—
Brotherton, Joseph

Clark, Dan—with Fox Studios
Clarke, Charles G.—with Geo. Melford, Fox Studios
Cowling, Herbert F.—Suffolk, Va.
Culver, Frank M.
Crockett, Ernest—
Cunningham, Henry—with Cecil B. De Mille Studio

Dean, Dixon M.—with Famous Players-Lasky, San Antonio
Dorin, Robert V.—
Dorsel, John—Ruth, Texas
DuPont, Max B.
Dubray, Joseph V.

Edeson, Arthur—with First National, New York City
Evans, Perry—

Fildew, Wm.
Fischbeck, Harry V.—with D. W. Griffith, Famous Players-Lasky, New York City
Fisher, Ray G.—with 2nd Unit, Universal, B. O. Studios
Freed, Alvin—with Fox Studios

Gaudio, Gretton
Gilks, Alfred—with Jane Cruze, Famous Players-Lasky
Gleunon, Bert—with Famous Players-Lasky
Good, Frank B.—
Gray, King D.—with Fox Studios
Griffin, Walter L.—with David Hartford Production
Guissart, Rene—Paris, France

Haller, Ernest—with Robert Kane Productions, New York City
Heimel, Alois G.—

Jacknin, Floyd—with Fred W. Jackman Productions
Jackman, Fred W.—directing Fred W. Jackman Productions
Jennings, J. D.—with Buster Keaton

Kirchtel, Marcel V.—with First National, Burbank
Koenekamp, Hans F.—
Korth, Robert

Kurle, Robert

Landers, Sam—
Lockwood, J. R.—
Lundin, Walter—with Harold Lloyd Productions, Metropolitan Studios
Lyons, Reginald—with Fox Studios.

Marshall, Wm.—with Raymond Griffith, Famous Players-Lasky
McCord, T. D.—
McGill, Barney—with Fox Studio
MacLean, Kenneth G.—with Mack Sennett Studios
Mac Williams, Glen—with Fox Studio
Meehan, George—with Fox Studios
Milner, Victor—with Famous Players-Lasky
Morgan, Ira H.—with Cosmopolitan, Metro-Goldwyn Mayer Studios
Mosorat, Nicholas—

Newton, Stephen S.—

Palmer, Ernest S.—with Lew Cowse
Perry, Burton—and Famous Players-Lasky, San Antonio
Perry, Paul P.—with Famous Players-Lasky, San Antonio
Polito, Sol—with Ken Maynard, First National

Reis, Park J.
Rose, Leo H.—Sydney, Australia
Rose, Jackson J.—with Universal
Rosher, Charles—with F. W. Murnau, Fox Studios

Schneiderman, George—with Fox Studio
Scott, Homer A.—
Seitz, John F.—
Sharp, Henry—with Metro Goldwyn Mayer Studios
Smither, Edward V.—with Pathe Fine Art Studio
Smith, Steve, Jr.—
Steene, E. Burton—with Famous Players-Lasky
Stumar, Charles—with Universal
Stumar, John—with Universal

Talbot, Lee H.—producing motion pictures for Pathe
Tetzlaff, Ollie H.—with Charlie Chaplin, Chaplin Studios
Turner, J. Robert—with Fox Studio

Van Buren, Ned—
Van Enger, Charles—with First National Production, Burbank
Van Trees, James C.—with First National Production, Burbank

Warrenton, Gilbert—with Universal
Wrighton, Harold—
Whitman, Philip H.—with Mack Sennett Studios, Scenario Department
Wilky, L. Guy—

Lubin, Thomas A.—Honorary Member
Webb, Arthur C.—Attorney

Meetings of the American Society of Cinematographers are held at called and Monday evenings in the A. S. C. assembly room—
1219-20-21-22 GUARANTY BUILDING
Hollywood Boulevard and Ivar Avenue
HOLLYWOOD, CALIFORNIA

LOYALTY PROGRESS ART

Charles Productions Inc
Loew State Building
New York

Address Reply to The Loew
7,200 Theatre
720 Seward Street
Hollywood, Calif.

Mr. H. F. Wagner,
Mitchell Camera Company
Hollywood, California

My dear Mr. Wagner:

It gives me great pleasure to
recommend the Mitchell Camera and my camera
man, William Marshall. Jules as in cinematog-
is excellence.

Particularly does he appre
the quick shifting features of the machine
which saves much-needed time and thereby s
a mighty blow to Old Man Overhead.

Allow let me congratulate y
upon the art attained by the Mitchell Camera

Sincerely Yours